

WHAT IS CLAIMED IS:

1. A liquid crystal display device comprising:
a substrate;
a first conductive layer on the substrate;
5 a first insulating layer on the first conductive layer;
a second conductive layer on the first insulating layer;
a third conductive layer on the second conductive layer;
a second insulating layer on the third conductive layer, the second insulating layer
having a hole exposing a portion of the third conductive layer;
10 a fourth conductive layer on the second insulating layer and electrically contacting the
third conductive layer; and
a fifth conductive layer between the third conductive layer and the fourth conductive
layer.
- 15 2. The liquid crystal display device according to claim 1, wherein the first conductive
layer includes a metal.
3. The liquid crystal display device according to claim 2, wherein the metal includes Al.
- 20 4. The liquid crystal display device according to claim 1, wherein the second conductive
layer includes a semiconductor.
5. The liquid crystal display device according to claim 4, wherein the third conductive
layer has first and second parts spaced from each other and the semiconductor is etched at
25 between the first and second parts of the third conductive layer.
6. The liquid crystal display device according to claim 1, wherein the third conductive
layer includes a metal.
- 30 7. The liquid crystal display device according to claim 1, wherein the fourth conductive

layer includes a transparent electrode.

8. The liquid crystal display device according to claim 1, wherein the fifth conductive layer includes a metal.

9. The liquid crystal display device according to claim 8, wherein the metal is selected from the group consisting of Mo, Ni, Cr, Cu, Ag and Pb.

10. The liquid crystal display device according to claim 1, further comprising a second semiconductor layer between the first insulating layer and the second conductive layer.

11. The liquid crystal display device comprising:

a substrate having first and second regions;

a thin film transistor on the first region of the substrate;

a pad portion on the second region of the substrate, the pad portion including:

a first conductive layer on the substrate;

a first insulating layer on the first conductive layer;

a second insulating layer on the first insulating layer, the second insulating layer having a hole exposing a portion the first conductive layer;

a second conductive layer on the portion of the first conductive layer and contacting the first conductive layer; and

a third conductive layer on the second insulating layer and contacting the second conductive layer through the hole in the second insulating layer.

12. The liquid crystal display device according to claim 1, wherein the first conductive layer includes a metal.

13. The liquid crystal display device according to claim 12, wherein the metal includes Al.

14. The liquid crystal display device according to claim 12, wherein the third conductive layer includes a transparent electrode.

15. The liquid crystal display device according to claim 12, wherein the second
5 conductive layer includes a metal.

16. The liquid crystal display device according to claim 15, wherein the metal is selected from the group consisting of Mo, Ni, Cr, Cu, Ag and Pb.

10 17. A liquid crystal display device comprising:
a substrate having first and second regions;
a switching device on the first region of the substrate, the switching device including:
a first conductive layer on the substrate;
a first insulating layer on the first conductive layer;
15 a second conductive layer on the first insulating layer;
a third conductive layer on the second conductive layer;
a second insulating layer on the third conductive layer, the second insulating
layer having a first hole exposing a portion of the third conductive layer;
a fourth conductive layer on the second insulating layer and electrically
20 contacting the third conductive layer; and
a fifth conductive layer between the third conductive layer and the fourth
conductive layer; and
a pad portion on the second region of the substrate, the pad portion including:
the first conductive layer on the substrate;
25 the first insulating layer on the first
conductive layer;
the second insulating layer on the first
insulating layer, the second insulating layer having a second hole exposing a portion the first
conductive layer;
30 the fifth conductive layer on the portion of the

first conductive layer and contacting the first conductive layer; and
the fourth conductive layer on the second
insulating layer and contacting the fifth conductive layer through the second hole in the
second insulating layer.

5 18. The liquid crystal display device according to claim 17, wherein fifth conductive layer
is selected from a group consisting of Mo, Ni, Cr, Cu, Ag and Pb.

10 19. A liquid crystal display device comprising:
a substrate;
a gate electrode on the substrate;
an insulating layer on the gate electrode;
a semiconductor layer on the insulating layer;
an ohmic contact layer on the semiconductor layer;
15 source and drain electrodes on the ohmic contact layer;
a protective layer on the source and drain electrodes, the protective layer having a hole
exposing a portion of one of the source and drain electrodes;
a conductive electrode on the protective layer and electrically contacting the one of the
source and drain electrodes; and
20 a contact layer between the one of the source and drain electrodes and the conductive
electrode.

20. The liquid crystal display device according to claim 19, further comprising a pad
portion on the substrate, the pad portion including:
25 a conductive pad on the substrate;
the insulating layer on the conductive pad;
the protective layer on the insulating layer, the protective layer having a second hole
over the pad;
the contact layer contacting the pad through the second hole; and
30 the conductive electrode contacting the contact layer through the second hole.

21. The liquid crystal display device according to claim 19, wherein the contact layer is selected from a group consisting of Mo, Ni, Cr, Cu, Ag and Pb.

5 22. A method of fabricating a liquid crystal display device comprising:

forming a switching device on a first region of a substrate, the switching device including:

a first conductive layer on the substrate;

a first insulating layer on the first conductive layer;

10 a second conductive layer on the first insulating layer;

a third conductive layer on the second conductive layer;

a second insulating layer on the third conductive layer, the second insulating layer having a first hole exposing a portion of the third conductive layer;

15 a fourth conductive layer on the second insulating layer and electrically contacting the third conductive layer; and

a fifth conductive layer between the third conductive layer and the fourth conductive layer; and

forming a pad portion on a second region of the substrate, the pad portion including:

the first conductive layer on the substrate;

20 the first insulating layer on the first conductive layer;

the second insulating layer on the first

insulating layer, the second insulating layer having a second hole exposing a portion the first conductive layer;

25 the fifth conductive layer on the portion of the first conductive layer and contacting the first conductive layer; and

the fourth conductive layer on the second insulating layer and contacting the fifth conductive layer through the second hole in the second insulating layer.

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23. The method according to claim 22, wherein fifth conductive layer is selected from a group consisting of Mo, Ni, Cr, Cu, Ag and Pb.

24. A method of forming a liquid crystal display device comprising:

5 forming a gate electrode on a substrate;
forming an insulating layer on the gate electrode;
forming a semiconductor layer on the insulating layer;
forming an ohmic contact layer on the semiconductor layer;
forming source and drain electrodes on the ohmic contact layer;
10 forming a protective layer on the source and drain electrodes, the protective layer having a hole exposing a portion of one of the source and drain electrodes;
forming a conductive electrode on the protective layer and electrically contacting the one of the source and drain electrodes; and
forming a contact layer between the one of the source and drain electrodes and the
15 conductive electrode.

25. The method according to claim 24, further comprising forming a pad portion on the substrate, the pad portion including:

a conductive pad on the substrate;
20 the insulating layer on the conductive pad;
the protective layer on the insulating layer, the protective layer having a second hole over the pad;
the contact layer contacting the pad through the second hole; and
the conductive electrode contacting the contact layer through the second hole.

26. The method according to claim 25, wherein the contact layer is selected from a group consisting of Mo, Ni, Cr, Cu, Ag and Pb.